Special Issue

Advances in Fatigue Life Assessment of Welded Structures

Message from the Guest Editor

The aim of this Special Issue is to provide an update in relation to state-of-the-art approaches for the fatigue assessment of metal welded joints. The topics that are of particular interest for this Special Issue are as follows:

- Fatigue strength of hybrid joints or joints between dissimilar materials;
- Fatigue strength of welded joints between Additively Manufactured (AM) parts;
- Fatigue strength of parts manufactured by Wire Arc Additive Manufacturing (WAMM);
- Fatigue strength of joints obtained by solid state welding;
- Applications to full-scale structures and industrial details;
- Criteria for fatigue assessment of welded joints under complex loading conditions, such as multiaxial constants and variable/random fatigue loadings;
- Effect of residual stresses on the fatigue strength;
- Post-welding treatments to enhance the fatigue strength of joints.

Guest Editor

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Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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